

REMARKS

Prior to entry of this Amendment, claims 1-42, 69 and 70 were pending in the application. In the Office Action mailed January 31, 2006, claims 1-33, 69 and 70 were rejected. Claims 34-42 were withdrawn from consideration as drawn to a non-elected invention.

With this response, claims 1, 5, 15, 32 and 69 have been amended to clarify the invention, and claims 30, 31, 34-42 and 70 have been canceled without prejudice. New claims 71-99 have been added. Upon entry of this response, claims 1-29, 32, 33, 69 and 71-99 will be pending.

Support for the new and amended claims is found throughout the specification and figures. For example, support for the amendments to claim 1 is found on page 22, lines 8-14 and in FIG. 1. Support for new independent claim 71 is found, for example, on page 23, lines 23-26 and in FIG. 6. Each of the new dependent claims 72-99 ultimately depends from claim 71 and corresponds to an original claim, but with a change in dependency. In particular:

- Claim 72 corresponds to original claim 2;
- Claim 73 corresponds to original claim 3;
- Claim 74 corresponds to original claim 4;
- Claim 75 corresponds to original claim 5;
- Claim 76 corresponds to original claim 6;
- Claim 77 corresponds to original claim 7;
- Claim 78 corresponds to original claim 8;
- Claim 79 corresponds to original claim 9;
- Claim 80 corresponds to original claim 10;
- Claim 81 corresponds to original claim 12;
- Claim 82 corresponds to original claim 13;
- Claim 83 corresponds to original claim 14;
- Claim 84 corresponds to original claim 17;
- Claim 85 corresponds to original claim 18;
- Claim 86 corresponds to original claim 19;
- Claim 87 corresponds to original claim 20;
- Claim 88 corresponds to original claim 21;

Claim 89 corresponds to original claim 22;
Claim 90 corresponds to original claim 23;
Claim 91 corresponds to original claim 24;
Claim 92 corresponds to original claim 25;
Claim 93 corresponds to original claim 26;
Claim 94 corresponds to original claim 27;
Claim 95 corresponds to original claim 28;
Claim 96 corresponds to original claim 29;
Claim 97 corresponds to original claim 32;
Claim 98 corresponds to original claim 33; and
Claim 99 corresponds to original claim 69.

No new matter is added.

Entry of the amendments and consideration of the following remarks are respectfully requested.

THE OBJECTION TO CLAIM 5 SHOULD BE WITHDRAWN

Claim 5 was objected to for an informality. In particular the Examiner noted that line 1 of claim 5 should recite --further-- before “comprising”. Applicant respectfully disagrees, and asserts that “plurality of microarray supports” of claim 5 is further limiting of the at least one microarray support of claim 1, and do not require the word “further”. However, since the amendment is viewed as not affecting the meaning of the claim, in order to expedite prosecution, claim 5 is amended herein to comply with the Examiner’s suggestion.

THE REJECTIONS UNDER 35 U.S.C. § 102
SHOULD BE WITHDRAWN

Claims 1-4 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lipton, U.S. Patent No. 5,770,441 (“Lipton”). Claims 1, 5-7 and 30 were rejected under 35 U.S.C. § 102(b) as being anticipated by Gabridge, U.S. Patent No. 4,435,508 (“Gabridge”). Claims 1, 5, 6, 8-11, 13-16, 23, 24, 28, 29 and 31-33 were rejected under 35 U.S.C. § 102(b) as being

anticipated by Angros, U.S. Patent No. 6,534,008 ("Angros"). Claims 1, 69 and 70 were rejected under 35 U.S.C. § 102(b) as being anticipated by Dudek, U.S. Patent No. 5,543,114 ("Dudek"). Applicant respectfully disagrees with the Examiner for the reasons presented below.

A claim is anticipated under 35 U.S.C. § 102 only if each and every element and limitation as set forth in the claim is found, either expressly described or inherently present, in a single prior art reference. *Glaxo, Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir. 1995). There must be *no differences* between the claimed invention and the reference disclosure as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Fdn. v. Genentech, Inc.* 927 F. 2d. 1565, 1576 (Fed. Cir. 1991). Anticipation requires that all aspects of the claimed invention were already described in a *single* reference. *Scripps Clinic & Research Fdn. v. Genentech, Inc.* 927 F. 2d. 1565, 1576 (Fed. Cir. 1991).

The presently claimed invention is a microarray cartridge that can be used for shipping, storing, and high-throughput processing of microarrays. The cartridge comprises a body having a cavity surrounded by a mating surface. Within the cavity are a reaction chamber and at least one microarray support supporting a microarray slide within the cavity such that a surface of the microarray slide covers the reaction chamber. A cover covers the cavity such that the slide is disposed between the cover and the reaction chamber. The cover may be sealingly adhered to the mating surface of the body by non-removable adhering means on all but one edge of the mating surface (claim 1), or the cavity may be completely sealed (claim 71). The microarray cartridge may include dimple features and/or ports which allow introduction of sample, reaction and wash solutions into the reaction chamber such that the solutions contact probes on the microarray slide.

Claims 1-4 Are Not Anticipated by Lipton under 35 U.S.C. § 102(b)

Lipton teaches a slide system for growth and/or identification of fungi or other microorganisms, comprising a unitary member with one or more compartments in which microorganisms may grow. The unitary member contains one or more openings through which air may flow from the outside environment into each of the compartments.

While Lipton teaches a cover sheet that may have an adhesive, the cover of Lipton is not sealingly adhered by non-removable adhering means as in independent claims 1 and 71 of

the present invention. In particular, the cover sheet of Lipton includes a pull tab to facilitate removal of the cover sheet to expose some or all of the contents within a container under the cover. See, e.g., Lipton at col. 4, lines 3-4; col. 7, lines 38-42; col. 14, lines 19-24; and col. 16, lines 16-25.

Moreover, the apparatus of Lipton requires openings (e.g., item 17 of FIG. 2) to allow air flow from the outside environment. See, e.g., Lipton at FIG. 2; col. 4, lines 7-10; col. 9, lines 6-10; and col. 11, lines 12-28. Thus, the compartment of Lipton is not completely sealed as is the cavity in independent claim 71 of the present invention.

For at least the foregoing reasons, Lipton does not anticipate independent claims 1 or 71. Since Lipton does not anticipate claim 1 or 71, it does not anticipate dependent claims 2-4 or claims 72-74. Accordingly Applicant respectfully requests withdrawal of the rejection of claims 1-4 under 35 U.S.C. § 102(b) as anticipated by Lipton.

Claims 1, 5-7 and 30 Are Not Anticipated by Gabridge under 35 U.S.C. § 102(b)

Gabridge teaches a tissue culture vessel comprising two rigid plates held together with screws that bind a growth substrate between the plates. The upper plate includes an aperture that provides access to the upper surface of the substrate, upon which tissues may be grown. Surrounding the aperture is a circular channel for positioning a petri dish cover to cover the aperture. (See, e.g., Gabridge at col. 2, lines 42 to col. 3, line 19; and FIG. 1.)

Claim 30 has been canceled. Applicant respectfully contends that Gabridge does not teach a microarray reaction cartridge having the features of claim 1 or 5-7, or of claim 71 or its corresponding dependent claims, of the present invention. For example, contrary to the suggestion of the Examiner, the petri dish cover (item 4 of FIG. 1) of Gabridge rests in the circular channel (item 3 of FIG. 1), and is not sealingly adhered to the upper plate; rather it is a removable cover (see Gabridge at col. 4, line 33). Moreover, considering the alternative perfusion cover (item 17 of FIG. 3) of Gabridge, such cover is removably attached to the top plate using thumb screws (see Gabridge at col. 3, lines 25-28) and is therefore not sealingly adhered by non-removable adhering means. Even if item 9 of Gabridge could be considered a microarray support as suggested by the Examiner on page 10 of the Office Action, Gabridge still does not disclose a cover that is sealingly adhered on all but one edge (claim 1) or is sealingly adhered so as to be completely sealed (claim 71) with a mating surface of a

body by non-removable adhering means as recited in these claims. Thus, for at least these reasons, Gabridge does not anticipate claim 1 or claim 71. Since Gabridge does not anticipate claim 1 or claim 71, it does not anticipate dependent claims 5-7 (or the corresponding claims which depend from claim 71) for at least the same reasons as discussed with respect to claims 1 and 71.

Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 1, 5-7 and 30 under 35 U.S.C. § 102(b) as anticipated by Gabridge.

Claims 1, 5, 6, 8-11, 13-16, 23, 24, 28, 29 and 31-33 Are Not Anticipated by Angros under 35 U.S.C. § 102(b)

Angros discloses an automated in situ heat induced antigen recovery and staining apparatus for treating a plurality of microscope slides. The apparatus of Angros comprises a plurality of reaction compartments, and each reaction compartment holds a microscope slide on the openable bottom of the reaction compartment. Above each reaction compartment is a sliding reagent dispensing strip, each with a plurality of capsules containing reagents that may be expelled from the capsule and dropped onto the surface of the microscope slide.

The reagent dispensing strip must be able to slide over the reaction compartment in order to dispense successive reagents (Angros at col. 6, lines 44-51), and therefore there is no cover sealingly adhered to a body by non-removable adhering means as in amended claim 1 or in new claim 71 of the present invention. Moreover, the openable bottom (item 40) of Angros, if presumed to be a "cover", also is not sealingly adhered by non-removable adhering means as it is openable from an application position (FIG. 3A) to an opened position (FIG. 3B). See Angros at col. 6, line 56 to col. 7, line 4. Thus, for at least these reasons Angros does not anticipate claim 1 or claim 71. Since Angros does not anticipate claim 1 or claim 71, it does not anticipate dependent claims 5, 6, 8-11, 13-16, 23, 24, 28, 29 and 32-33 (claim 31 having been canceled), or the corresponding claims which depend from claim 71, for at least the same reasons as discussed with respect to claims 1 and 71.

Accordingly, for at least the reasons discussed above, Applicant respectfully requests withdrawal of the rejection of claims 1, 5, 6, 8-11, 13-16, 23, 24, 28, 29 and 31-33 under 35 U.S.C. § 102(b) as anticipated by Angros.

Claims 1, 69 and 70 Are Not Anticipated by Dudek under 35 U.S.C. § 102(b)

Dudek discloses a unitary biological specimen apparatus, having a bottom and a removable lid for processing multiple biological and medical specimens. The plate part of the lid and the plate part of the bottom are both perforated in the form of strainers to facilitate washing of the specimens.

In contrast to Applicant's claims 1 and 71, Dudek does not teach a cover that is sealingly adhered by non-removable adhering means. In particular, the lid of Dudek is movable between open and closed positions, and after washing specimens the lid is removed from the bottom to access the specimens for further processing. See, e.g., Dudek at col. 1, lines 41-44 and col. 3, lines 27-29.

Thus, Dudek does not anticipate claim 1 or 71. Since Dudek does not anticipate claim 1, it does not anticipate dependent claims 69 or 91 (claim 70 having been canceled) for at least the same reasons as discussed with respect to claims 1 and 71. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 1, 69 and 70 under 35 U.S.C. § 102(b) as anticipated by Dudek.

**THE REJECTIONS UNDER 35 U.S.C. § 103
SHOULD BE WITHDRAWN**

Claims 12, 17-22 and 25-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Angros. In particular, the Examiner contends that Angros discloses the invention substantially as claimed, except for particular dimensions of the device which are obvious as general conditions. Applicant respectfully disagrees with the Examiner's rejections for the reasons presented below.

A finding of obviousness under 35 U.S.C. § 103(a) requires a determination that the differences between the claimed subject matter and the prior art are such that the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. *Graham v. Deere*, 383 U.S. 1 (1956). The relevant inquiry is whether the prior art suggests the invention and whether the prior art provides one of ordinary skill in

the art with a reasonable expectation of success. Both the suggestion and the reasonable expectation of success must be found in the prior art. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

Angros is discussed above. Applicant's claims 12, 17-22 and 25-27 depend from claim 1. The case law is clear that "[d]ependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious." *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988)." Thus, Applicant respectfully submits that, for at least the reasons discussed above with respect to claims 1 and 71, Angros does not teach or suggest each and every limitation of claims 12, 17-22 and 25-27 or the corresponding claims depending from claim 71. For example, Angros does not teach or suggest a cover sealingly adhered to a body by non-removable adhering means as in amended claim 1 or new claim 71. In particular, since the apparatus of Angros uses a sliding reagent dispensing strip above each compartment, and an openable bottom on the bottom of each compartment, there is clearly no suggestion in Angros to use a cover that is sealingly adhered to a body by non-removable adhering means.

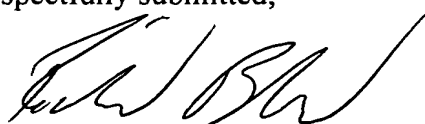
Accordingly, for at least the reasons discussed above, Applicant respectfully requests withdrawal of the rejection of claims 12, 17-22 and 25-27 under 35 U.S.C. § 103(a) as being rendered obvious by Angros.

CONCLUSION

Applicant respectfully requests entry of the foregoing amendments and remarks into the file of the above-identified application. Applicant believes that all the pending claims are in condition for allowance. Withdrawal of the Examiner's rejections and allowance of the application are respectfully requested.

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Respectfully submitted,



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Enclosure